HIV Sentinel Surveillance
Round 2008

National Action Plan
September 2008 – June 2009

National AIDS Control Organisation
Ministry of Health and Family Welfare
Government of India

Index

Background

HIV Sentinel Surveillance is an annual activity of tracking the HIV epidemic in the country with the objective of understanding the level and trends of HIV epidemic among different population groups as well as to identify the spread of the epidemic to new pockets. HIV Surveillance in India has started from the year 1985 when ICMR for the first time initiated the surveillance activity in blood donors and patients with Sexually Transmitted Diseases (STDs). After National AIDS Control Organisation (NACO) was established in 1992, sentinel surveillance for HIV/AIDS in India had been initiated with sentinel sites confined to selected cities in the beginning. In 1998, NACO formalized annual sentinel surveillance for HIV infection across the country. Over the years, the surveillance network has expanded from 180 in 1998 to 703 in 2005. This was expanded greatly for 2006 surveillance round to a total of 1,122 sites, to cover all the districts of the country. During 2007, HIV Sentinel Surveillance was conducted at 1,134 sites across the country.

There has been gradual development in the strategies adopted for HIV Sentinel Surveillance and the quality assurance mechanisms that ensure reliable data. As an effort to improve the HIV Surveillance in the country, an international Technical Consultation to Review HIV Surveillance in India was held in April 2008 at New Delhi with the support of WHO-SEARO. Another technical consultation on the Estimation of ART Needs, HIV Incidence and AIDS Related Mortality was organized in April 2008 with the support of National Institute of Medical Statistics, New Delhi. Besides, National Post-surveillance Review Meeting of Regional and National Institutes for the HIV Sentinel Surveillance Round 2007 also has brought out important challenges facing HIV Sentinel Surveillance. As an outcome of these consultations, following are the important considerations for HIV Sentinel Surveillance 2008.

1. Taking up Dried Blood Spot (DBS) method of testing for HIV Sentinel Surveillance 2008.
2. Introducing informed consent at High risk group sites.
3. Revising HIV Sentinel Surveillance Guidelines regarding DBS testing method and informed consent.
4. Data Entry of HIV Sentinel Surveillance to be carried out by RIs and SACS.
5. Procurement and supply of kits and consumables to all sentinel sites to be completed before the beginning of the round.
6. Work out modalities for incidence testing as a part of HIV Sentinel Surveillance.

Taking lead from the recommendations of various technical consultations, NACO, with the support of WHO, NIHFW and RIs has initiated a series of activities to operationalise the recommended improvements in HIV Sentinel Surveillance. With the support from WHO-India, All India Institute of Medical Sciences, New Delhi has taken up 'Operational Feasibility Study for the implementation of Dried Blood Spot (DBS) Method in HIV Sentinel Surveillance'. Inputs from the NFHS-III experts who have rich experience in the use of DBS in field settings were also considered. Discussions with the programme managers of targeted interventions at NACO as well as SACS are held to finalise the strategy for HIV surveillance among high risk groups. The improvements that are being brought into the system of HIV Sentinel Surveillance from 2008 are detailed in the subsequent sections.

Objectives of HIV Sentinel Surveillance

1. To determine the level of HIV infection among general population as well as high risk groups in different states.
2. To understand the trends of HIV epidemic among general population as well as high risk groups in different states.
3. To understand the geographical spread of HIV infection and to identify emerging pockets.
4. To provide information for prioritization of programme resources and evaluation of programme impact.
5. To estimate HIV Prevalence and HIV burden in the country.

Strategy for HIV Sentinel Surveillance Round 2008

As mentioned earlier, during the round of HIV Sentinel Surveillance 2008, many efforts are being made to improve the surveillance system, technically as well as operationally. While revising the testing strategy and improving the sample collection method at high risk group sites are the major strategic changes on the technical front, focus on establishing an effective, structured training programme and institutionalizing a strengthened monitoring & supervision system are the important strategic efforts on the operational front. Most of the problems affecting the quality of surveillance outcomes can be addressed through EFFECTIVE TRAINING, SUPPORTIVE SUPERVISION AND CLOSE, ACTION-ORIENTED MONITORING. Training and Monitoring of Surveillance Activities from the pre-surveillance phase to post-surveillance phase will be given highest priority during HIV Sentinel Surveillance Round 2008.

Important strategic actions for HIV Sentinel Surveillance Round 2008 are listed below followed by detailed outline of some of the issues.

1. Expansion of sentinel sites among high risk groups with a focus on expansion of MSM sites, IDU sites and Migrant sites. Expansion of FSW sites in the North East.
2. The strategy to be adopted for collection and testing of samples during HIV Sentinel Surveillance Round 2008 is as follows.

S.No	Item	Surveillance among General Population	Surveillance among High Risk Groups (HRG)	Surveillance among Special Groups
1	Population Group	Pregnant women attending ANC Clinics of 15 – 49 years age group.	Female Sex Workers, Men who have Sex with Men, Injecting Drug Users, Eunuchs, Migrants, Truckers of 18 – 49 years age group.	Patients attending STD Clinics of 15 – 49 years age group.
2	Sample size	400 through consecutive sampling	250 through consecutive sampling at service points or satellite points.	250 through consecutive sampling
3	Method of sample collection	Routine method of blood collection at ANC Clinics (Intra-Venous Samples)	Dried Blood Spot (DBS) Method at HRG sites (Drops of blood collected through finger prick)	Routine method of blood collection at STD Clinics (Intra-Venous Samples)
4	Testing Strategy	Unlinked Anonymous	Unlinked Anonymous with Informed Consent* and Additional testing for Anemia through Haemocue	Unlinked Anonymous
5	Testing Protocol	2-test protocol	2-test protocol	2-test protocol

**Note:*

1. *Unlinked Anonymous with Informed Consent (Voluntary Anonymous): Collection of blood samples through informed consent for HIV testing and not providing HIV test results.*
2. *Written Informed consent will be sought from the respondent. If the respondent is illiterate, the informed consent form would be read out and thumb impression would be taken.*
3. *Since informed consent is sought for taking sample, there is no need to provide any other test result to the person. Previously, the samples were tested for Syphilis and VDRL test results were provided to the persons. But, DBS samples cannot be used for testing for Syphilis. Hence, VDRL test will not be done on samples from HRG sites. Instead, testing will be done for Anemia using Haemocue and using a drop of blood collected through finger prick. The Haemocue results will be provided immediately to the person.*
4. *Since informed consent is introduced, only the persons with age of 18 years or more can be included in surveillance. Hence, the age group of the persons from whom samples are collected at HRG sites would be 18 – 49 years instead of 15 – 49 years.*
5. *Before seeking informed consent, specific demographic information (two or three variables as specified) will be collected and entered in a separate format. For those who give consent for taking blood sample for HIV testing, the details in the Data form should be enquired and recorded.*
6. *All the HRG individuals approached for informed consent will be issued a voucher that enables him/her to get free HIV test at any ICTC. A circular in this regard will be given to all ICTCs in the country.*
7. *HRG individuals should be recruited for sample collection at the service points of the Targeted Intervention such as TI Clinic or Drop-in-centre or any point where the Peer Educator/ NGO Staff meets and interacts with the HRG individuals under the TI project. DBS method of sample collection is very convenient to be carried out even in field settings.*
8. *Depending on the availability of details of the service points and data on size of coverage at each service point, the strategy of recruiting samples can be worked out in discussion with the Regional Institute.*
9. *At each service point where the samples are being collected, Consecutive sampling has to be adopted and the HRG individuals who are present at the service point have to be approached for their informed consent for taking blood sample for HIV testing.*
10. *While approaching the HRG individuals at the service points for informed consent for taking blood sample for HIV testing, SELECTION BIAS OF ALL KINDS HAS TO BE ELIMINATED. PEER EDUCATOR/ NGO STAFF SHOULD NEITHER PREFER NOR REJECT ANY HRG INDIVIDUAL DUE TO HIS/HER HIV STATUS, IF IT IS KNOWN, OR DUE TO HIS/HER PARTICPATION STATUS DURING PREVIOUS ROUNDS OF SURVEILLANCE CONDUCTED IN PREVIOUS YEARS. ALL THOSE PRESENT AT THE SERVICE POINT HAVE TO BE APPROACHED FOR INFORMED CONSENT IRRESPECTIVE OF THE HIV STATUS OF THE HRG INDIVIDUAL AND IRRESPECTIVE OF WHETHER THE HRG INDIVIDUAL HAS PARTICIPATED IN THE PREVIOUS ROUNDS OF SURVEILLANCE.*
11. *Efforts should be made to cover all the service points under a TI Project and this process has to be continued till 250 blood samples are collected or till the three month period of Surveillance is completed, whichever is earlier. At the same time, it has to be ensured that sample is not taken more than once from the same HRG individual DURING THE THREE MONTH PERIOD OF SURVEILLANCE.*

3. Effective operational plan for HIV surveillance at HRG sites. Active involvement of programme managers of Targeted Interventions at SACS and NACO in surveillance activities. Inclusion of JD(TI)/ NGO Advisor at SACS in surveillance activities. Process Documentation of collection of DBS Samples to understand and analyse the field conditions for better planning in the future rounds and for developing Indian standards for the use of DBS Method.

4. Ensuring procurement and supply of testing kits and consumables to sentinel sites and testing laboratories 15 days before the start of HIV Sentinel Surveillance Round. It is proposed to limit the number of testing labs in each state to four to five, instead of large number of labs, so that quality can be ensured easily. It is also suggested to do first HIV test through ELISA of high sensitivity and second test can be ELISA or Rapid test of high specificity.
5. Development of Structured Training Curriculum and Training Modules for sentinel site in-charges, sentinel site lab technicians, testing laboratory in-charges and testing laboratory lab technicians involved in surveillance, along with development of Trainer's Manual.
6. Special training to HRG site in-charges and HRG site lab technicians on the use of DBS Method. Involvement of trainers from NFHS-III team in training the HRG site staff in using DBS Method.
7. Testing of DBS samples to be done at the laboratories attached to the Regional Institutes and other designated National Reference Laboratories (NRLs), and NARI, Pune will act as Nodal Reference Laboratory for EQAS in testing of DBS Samples.
8. Identifying two new Regional Institutes for strengthening surveillance activities in the North East Zone and East Zone.
9. Improved Monitoring and Supervision:
    a. Developing an Integrated Monitoring System for HIV Sentinel Surveillance including Sentinel Site evaluation & profiling before the round and site-wise performance reports after the round.
    b. Every HRG site to be visited by a supervisor (State team/ RI team/ Central team) during the round.
    c. Strengthening State Surveillance Teams and district-wise allotment of responsibility to SST members.
10. Measures for enhancing Data Quality: Simultaneous Double Data Entry of surveillance data at SACS and RIs and cross-matching for ensuring 100% accuracy. Concurrent data monitoring for identification of unusual findings as they emerge and immediate initiation of investigation into the causes of such unusual findings.

System for Double Data Entry and Review

1. Format of Data Forms to be finalized by NIHFW, New Delhi and offline software package to include changes made in the Data forms.
2. Data Forms will be printed in Triplicate and packed in boxes of 50 each for safe transport from sentinel site to testing lab to SACS to RI.
3. Double Data Entry with one process of data entry happening at SACS and simultaneous data entry at Regional Institutes.
4. Data Entry at SACS and RI will only be through offline software package provided by NIHFW, New Delhi
5. Each RI will be provided the required software package along with passwords for entering the data of allotted states.
6. Testing labs in the states should send the test results along with the Triplicate Data Forms to SACS every 15 days.
7. SACS has to keep one copy with them for data entry, send the second copy to RI and third copy to NIHFW, New Delhi.
8. Designated labs for DBS Testing will send the test results along with the Triplicate Data Forms to the concerned Regional Institute every 15 days.
9. RIs have to keep one copy with them for data entry, send the second copy to concerned SACS and third copy to NIHFW, New Delhi.
10. Data entry to be done simultaneously as and when the data is reported from testing labs to allow immediate identification of unusual findings and feedback action.
11. Staff at Regional Institutes to review the data once in 15 days to identify any unusual findings and initiate immediate investigation or corrective actions. Each RI will also be provided with administrator password to review the entered data and identify the unusual findings.
12. After completion of data entry, both SACS and RI shall upload the database on to the online server and cross-matching will be done online by the RI. The software is designed to provide this option of cross-matching and it will generate a list of mis-matches with the unique ID and the data elements where the mismatch occurred. This list of mismatches can be taken as a print out. Then RIs have to revisit the specific Data forms to identify the error and correct the data online.
13. There will also be a provision (either in the same online software or by importing the list of errors to Excel Spreadsheet) to document against each mismatch, whether the error was in RI database or SACS database. This has to be recorded by the RI to locate the problem areas and for assessing future training needs.
14. Mismatches should also be communicated to SACS after the process is completed.
15. After correcting all mismatches online, RIs should inform NIHFW, New Delhi and the final cleaned database will be freezed by NIHFW, New Delhi. The two databases uploaded by RI and SACS before corrections will be removed and the final database will be hosted on the server in uneditable or 'Read Only' mode. Both RIs and SACS can access the final database of their respective states for doing further analysis.
16. This system ensures early availability of verified, reviewed and accurate data after surveillance round.

Structure and Roles

NACO conducts HIV Sentinel Surveillance and estimation with the support of two National institutes: National Institute of Health and Family Welfare, New Delhi and National Institute of Medical Statistics, ICMR, New Delhi. Besides, the central team comprising of experts from WHO, UNAIDS and other national and international agencies provide continuous support and guidance. Since 2006, five regional institutes (RIs) have been identified in the country, that not only help in monitoring and supervision during surveillance, but also in improving quality of the data collected and its analysis. From this round, two new Regional Institutes are identified: National Institute of Cholera and Enteric Diseases, Kolkata for East Zone and Regional Institute of Medical Sciences, Imphal for North East Zone.

The team at each RI comprises of two epidemiologists/ public health experts and one micro-biologist. They are supported by one or two research officers, one computer assistant/data supervisor and three to four data entry operators depending on the volume of data load. The distribution of states to these RIs is given in the table below. Apart from these, a State Surveillance Team is constituted by the concerned RI for each state, comprising of public health experts and microbiologists who take care of the training of the personnel involved in sentinel surveillance system as well as supervision and monitoring during the surveillance.

Name of Regional Institution	States of Responsibility
Central Zone: All India Institute of Medical Science, New Delhi **(5 States)**	Uttar Pradesh, Bihar, Jharkhand, Uttaranchal, and Delhi.
North Zone: Post-graduate Institute of Medical Education and Research, Chandigarh **(5 States)**	Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab and Chandigarh.
East Zone: National Institute of Cholera and Enteric Diseases, Kolkata **(4 States)**	West Bengal, Chhattisgarh, Sikkim and Andaman & Nicobar Islands.
East Zone: All India Institute of Hygiene and Public Health, Kolkata **(4 States)**	Assam, Meghalaya, Arunachal Pradesh and Nagaland
North East Zone: Regional Institute of Medical Sciences, Imphal **(3 States)**	Manipur, Mizoram, and Tripura.
West Zone: National AIDS Research Institute, Pune **(7 States)**	Maharashtra, Gujarat, Goa, Madhya Pradesh, Rajasthan, Daman & Diu, and Dadra Nagar Haveli.
South Zone: National Institute of Epidemiology, ICMR, Chennai **(7 States)**	Andhra Pradesh, Tamil Nadu, Karnataka, Kerala, Orissa, Pondicherry and Lakshadweep.

Roles and Responsibilities of NACO

1. Overall planning, coordination, implementation and monitoring the HIV Sentinel Surveillance activities in the country
2. Finalisation of Action Plan for HIV Sentinel Surveillance Round 2008
3. Release of Grant-in-aid for National and Regional Institutes for HSS 2008
4. Revision of Financial Assistance to Sentinel Sites

5. Ensuring coordination with and active involvement of Programme managers of Targeted Interventions at NACO and SACS levels
6. Assessment of requirement and Procurement of testing kits for HSS 2008, including the requirements for collection of DBS samples at HRG sites and testing of DBS samples at the designated testing labs
7. Identification of laboratories for testing of DBS Samples during HSS 2008
8. Sentinel site and testing lab evaluation and profiling before the round of HIV Sentinel Surveillance
9. Development and institutionalization of Integrated Monitoring System for HIV Sentinel Surveillance (including maintaining the database of contact information of all the staff involved in HIV Sentinel Surveillance from central level to sentinel site level)
10. Preparation of fortnightly updates on the surveillance activities

Roles and Responsibilities of WHO-India

1. Operational Feasibility Study for the Implementation of DBS Method in HIV Sentinel Surveillance
2. Finalisation, Printing and Distribution of Operational Guidelines for HIV Sentinel Surveillance Round 2008 (Including operational flow charts to be displayed at sentinel sites and testing labs and Informed Consent Form & ICTC Voucher to be used at HRG sites)
3. Finalisation, Printing and Distribution of Training Curriculum and Modules for HSS 2008
4. Support RIs in training of site in-charges and lab technicians of HRG sites in using DBS method
5. Support NARI, Pune in training Lab In-charges and Lab technicians at the RIs in testing of DBS Samples

Roles and Responsibilities of NIHFW, New Delhi

1. Overall planning, coordination, implementation and monitoring of HIV Sentinel Surveillance activities in the country
2. Finalisation and Printing of Data Forms in Triplicate and their distribution
3. Freezing the list of sentinel sites (including correction of errors in names of the sites, district names etc.) and the testing labs to which they are linked
4. Pre-surveillance meeting of Regional Institutes
5. Pre-surveillance Orientation meeting for focal persons from National Reference Laboratories participating in EQAS for HIV Sentinel Surveillance
6. Incorporation of changes in the Data forms in the offline software package for data entry
7. Improving the web-based data entry system for HIV Sentinel Surveillance
8. Provision of offline software package to RIs along with the passwords for entering the data and reviewing the entered data of the allotted states
9. Training of Data Entry Operators from SACS and RIs in the data entry system
10. Institutionalization of Integrated Monitoring System for HIV Sentinel Surveillance
11. National Post-surveillance review meeting of RIs and Central Team Members
12. Data analysis and preparation of HIV Surveillance Country Report

Roles and Responsibilities of Regional Institutes

1. Constitution of State Surveillance Teams and district-wise allotment of responsibility (See Details Below)
2. Providing technical support to SACS and State Surveillance Teams in identifying new sites for surveillance. Validation of addition or deletion of sentinel sites/ testing labs in the states. Finalisation of sentinel sites and testing labs in the states and establishing linkages between the testing labs and their allocated sentinel sites from which they receive the samples.
3. Validation of specific proposals from SACS regarding sanction of new equipment to certain sentinel sites/ testing labs
4. Pre-surveillance meetings of focal persons and SSTs from the allocated states including training in DBS Method
5. Training of site in-charges and lab technicians of HRG sites in using DBS method in the allocated states with the support of WHO and NARI, Pune. Training programme to be organized by RI and budgetary support on per-participant basis and TA/DA for the participants be provided by SACS from surveillance head.
6. Supervision of and participation in training programmes for site in-charges and lab technicians of ANC sites and STD sites conducted by SACS and SSTS
7. Supervision of and participation in training programmes for lab in-charges and lab technicians of testing laboratories in the states, conducted by SACS and SSTs
8. Ensuring that all SACS have supplied testing kits and consumables to sentinel sites and testing labs 15 days before the start of the round
9. Ensuring that all SACS have disbursed funds to the sentinel sites 15 days before the start of the round
10. Supervisory visits to sentinel sites during the surveillance round
11. Ensuring timely reporting by SACS and testing labs during the surveillance round and take up corrective action as and when required
12. Providing guidance to SACS in addressing problems at specific sentinel sites or testing labs
13. Data Entry of the data that is collected during the surveillance round from the allotted states simultaneously with SACS followed by cross-matching the data entered by RI and SACS for identifying inaccuracies, rectifying the inaccuracies and providing the final cleaned data to NIHFW, New Delhi through the web-based data entry system
14. Concurrent data monitoring for identification of unusual findings as they emerge and immediate initiation of investigation into the causes of such unusual findings
15. Ensuring that all SACS disburse honorarium to sentinel sites and testing labs within two months after completion of round
16. Timely reporting (both forward reporting to NACO/ NIHFW and feedback reporting to SST/ SACS/ Testing Lab) in the prescribed formats during the round of surveillance
17. Preparation and submission of Report of activities undertaken during surveillance and Analysis of the surveillance findings in the allocated states
18. Undertaking special epidemiological or operational studies and in-depth analyses during the inter-surveillance period.

Additional Responsibilities of NARI, Pune

1. Training Lab In-charges and Lab technicians at the designated testing labs for testing of DBS Samples
2. Acts as Reference Laboratory for EQAS in testing of DBS samples.

Structure of State Surveillance Team (SST)

1. SSTs act as extension teams for RIs in each state. SSTs will be constituted by RIs by selecting public health experts and microbiologists from medical colleges in the respective states.
2. Each SST consists of **THREE to EIGHT** members from medical colleges in the state depending on the number of districts and spread of sentinel sites and testing labs.
3. Composition of SST is as below:
    a. Two to Five Public Health Experts
    b. One to Three Microbiologists
4. SST works under the guidance of RI and reports to RI.
5. All the districts in the state are distributed among the SST members with the responsibility of undertaking surveillance related tasks in their respective districts.
6. Honorarium and TA/DA for the members of SST will be paid by RI from the surveillance grant.

Roles and Responsibilities of State Surveillance Teams

1. Support RI in validation of new sentinel sites/ testing labs.
2. Support RI and SACS in training of site in-charges, testing lab in-charges and lab technicians.
3. Support SACS in ensuring timely implementation of surveillance activities at sentinel sites and testing labs in their respective districts
4. Supervisory visits to sentinel sites and testing labs in their respective districts during the round
5. Support SACS in ensuring that sentinel sites send samples every week to testing labs, testing labs report every week on the status of receiving samples from sentinel sites and that testing labs send the test results along with the Data forms every 15 days to SACS.
6. Initiate corrective action at sentinel sites/ testing labs on identification of any problem or on receiving any feedback from RI or NACO and submitting Action Taken Report (ATR) to RI and NACO in the prescribed formats
7. Submit a brief summary Report consolidating the activities and actions undertaken by each member of SST at the end of surveillance round.

Roles and Responsibilities of SACS

1. Overall planning, coordination and implementation of surveillance activities in their state.
2. Filling up of vacancies in the posts of Deputy Director (M&E and Surveillance) at SACS
3. Intimation to NACO/ NIHFW of complete contact details of the focal person for surveillance activities at SACS before the start of round
4. Expansion of HRG sites – Selection of new sites in consultation with TI division at SACS. Deletion of poorly performing or non-cooperating sites/ testing labs and selection of new sites/ testing labs have to be validated by RI and approved by NACO. SACS has to ensure timely submission of proposals for validation by RIs and approval by NACO.

5. Review of Testing Lab Situation in the state with an objective to limit the testing of samples during surveillance to a less number of testing labs equipped with doing ELISA test and submitting the finalized list of testing labs in the states along with the kit requirement (ELISA or Rapid and Quantity in terms of number of tests)
6. Issuing circular to site in-charges of all HRG sites to identify a lab technician for HSS 2008 and obtaining the complete contact details (Name, Mobile No, Email Id) of the lab technician at each HRG site along with three recent passport photos.
7. Collection and submission to NACO, the complete contact details of the testing lab in-charges and site in-charges participating in HIV Sentinel Surveillance before the start of round
8. Identify and address at local level, the problems of infrastructure or human resource or issues pertaining to cooperation from health authorities at district or state levels at any specific sentinel site or testing lab in the state. If any issue needs approval from NACO, it has to be formally written well in advance through proper technical validation of RIs wherever required.
9. Lack of involvement of concerned health authorities at district or state level is identified as a common cause for many problems in many states. Hence, SACS have to ensure that a formal communication is sent from State Health Secretary/ Director of Health Services to all the Chief Medical Officers (CMO) of all districts and Medical Superintendents of tertiary hospitals/ medical colleges involved in HIV Sentinel Surveillance, soliciting their cooperation and support during the implementation of HIV surveillance activities. List of sentinel sites in each district should also be communicated to all the CMOs. Depending on the situation in a particular state, SACS may even organize pre-surveillance orientation meeting for all CMOs and concerned Medical Superintendents with State Health Secretary/ Director of Health Services chairing such meetings.
10. Provide budgetary support for training of site in-charges and lab technicians of HRG sites in using DBS method conducted at RIs from the surveillance head under approved annual action plan.
11. Training for site in-charges and lab technicians of ANC sites and STD sites
12. Training for lab in-charges and lab technicians of testing laboratories in the state
13. Supply of kits and consumables to sentinel sites and testing labs 15 days before the start of the round
14. Disbursement of designated funds (POL for transportation of samples, TA/DA for personnel transporting samples and contingency expenditures) to sentinel sites 15 days before the start of the round.
15. Sentinel Site Evaluation and Profiling before the start of the round to identify the site specific problems and to prioritise sentinel sites for supervisory visits.
16. Constitution of Supervisory Teams for visits within the state during the round
17. Ensuring timely implementation of surveillance activities at sentinel sites and testing labs
18. Ensuring that sentinel sites send samples every week to testing labs, testing labs report every fortnight on the status of receiving samples from sentinel sites and that testing labs send the test results along with the Data forms every 15 days to SACS.
19. Timely reporting (both forward reporting to RIs/ NACO/ NIHFW and feedback reporting to SST/ Testing Lab) in the prescribed formats during the round of surveillance

20. Disbursement of honorarium and distribution of participation certificates to Sentinel sites and testing labs within two months after the completion of round
21. Analysis of surveillance findings and preparation of state reports.

Roles and Responsibilities of Site In-charge/ Medical Officer at sentinel sites

1. Participation in training programme for HIV Sentinel Surveillance.
2. Reporting of any delays in receiving kits, consumables, operational guidelines or Data forms before the start of the round to SACS/ RI/ NACO.
3. Ensure timely implementation of HSS activities.
4. Ensuring adherence to Technical and Operational Guidelines for HIV Sentinel Surveillance in recruiting samples, collecting, packing, storing and transporting samples to testing labs.
5. Proper filling of Data forms and duly signing the forms before sending them to testing labs.
6. Reporting of any operational problems during the round to SACS/RI/NACO.

Roles and Responsibilities of Lab In-charge/ Medical Officer of Testing Labs

1. Participation in training programme for HIV Sentinel Surveillance.
2. Ensuring quality standards in testing of blood samples for HIV.
3. Participating in EQAS for HSS by sending all positive and 5% of negative samples to the concerned NRL.
4. Fortnightly reporting of test results and dispatch of Data forms to SACS.
5. Testing labs are the focal points for monitoring HSS activities. Hence, lab in-charges have a major role in fortnightly reporting the progress of HSS activities in the prescribed formats. All reporting for monitoring purposes will be through e-mail/ fax/ telephonically depending on the access to different modes of communication.

Roles and Responsibilities of National Reference Laboratories

1. Participation in orientation programme for HIV Sentinel Surveillance
2. Testing all HIV Positive samples and 5% of HIV Negative samples sent from testing laboratories participating in HIV Sentinel Surveillance for External Quality Assurance.
3. Report to SACS/ RI/ NACO about the receipt of samples from testing labs every 15 days in the prescribed formats.
4. Provide test results every 15 days to the testing labs, SACS, RI and NACO in the prescribed formats

Human Resource Involved in HSS

S.No	Institution Involved	Cadre Involved
1	National AIDS Control Organisation	Joint Director (Basic Services Division)
		Technical Officer (Surveillance)
2	Technical Resource Group for Surveillance	As constituted
3	National Institute of Health and Family Welfare, New Delhi	Nodal Person for HIV Sentinel Surveillance
		Epidemiologist
		Project Associate/ Research Officer
		Computer Assistant
4	National Institute of Medical Statistics, New Delhi	Director, NIMS, New Delhi
		Deputy Director, NIMS, New Delhi
		Consultant for HIV Estimation
5	Central Team Members	As constituted
6	Regional Institutes (Seven)	Two Public Health Experts/ Epidemiologists
		One Microbiologist
		Project Coordinator/ Epidemiologist
		Two Research Officers – Field and Lab
		Computer Assistant/ Office Assistant
		Data Entry Operators (Based on Requirement)
7	State Surveillance Teams (One in each State)	Two to Five Public Health Experts
		One to Three Microbiologists
8	State AIDS Control Society	Deputy Director (Surveillance)
		State Epidemiologist
		Focal Person at SACS for TI Programme
		Constituted Team for Supervisory Visits
9	Sentinel Sites	Site In-charge (Medical Officer/ NGO In-charge)
		Lab Technician
		Nurse/ Assistant
10	Testing Labs in states	Lab In-charge (Medical Officer)
		Lab Technician
11	National Reference Laboratories for EQAS of venous samples from Testing Labs in States	Lab In-charge (Medical Officer/ Professor)
		Lab Technician
12	Designated Laboratories for Testing DBS Sampels	Lab In-charge (Medical Officer/ Professor)
		Lab Technicians (Based on Requirement)
13	NARI, Pune for EQAS of DBS Samples	Lab In-charge (Medical Officer/ Professor)
		Lab Technicians (Based on Requirement)

Activity Plan

PRE-SURVEILLANCE ACTIVITIES

S.No	Activity	Timeline	Responsibility
FINALISATION OF STRATEGY AND DOCUMENTS			
1	Operational Feasibility Study for Implementation of DBS Method	15th Oct 2008	WHO
2	Finalisation of Operational Guidelines for HSS 2008	30th Sept 2008	WHO
3	Printing and supply of Operational Guidelines for HSS 2008 to SACS	15th Oct 2008	WHO
4	Finalisation of Curriculum and Modules and Trainer's Manual for Training of ANC & STD Site Personnel	30th Sept 2008	WHO
5	Printing of Training Material for HSS 2008 for ANC & STD Site Personnel	15th Oct 2008	WHO
6	Finalisation of Curriculum and Modules and Trainer's Manual for Training of HRG Site Personnel	15th Oct 2008	WHO
7	Printing of Training Material for HSS 2008 for HRG Site Personnel	31st Oct 2008	WHO
8	Finalisation of Data Forms for HSS 2008	30th Sept 2008	NIHFW
9	Printing of Data Forms for ANC & STD sites in Triplicate and Distribution of Data Forms to SACS	15th Oct 2008	NIHFW
10	Printing of Data Forms for HRG sites in Triplicate and Distribution of Data Forms to SACS/ RIs (to be distributed during training)	15th Nov 2008	NIHFW
11	Review of Web Based Data Entry System at NIHFW	15th Sept 2008	NACO
12	Changes in Web Based Data Entry System at NIHFW	31st Oct 2008	NIHFW
13	Finalisation of Consent Form and ICTC Voucher for HRG Sites	30th Sept 2008	WHO
14	Printing of Consent Form & ICTC Voucher for HRG Sites and distribution to SACS	15th Nov 2008	NIHFW
15	Finalisation and printing of Participation Certificates	31st Dec 2008	NACO
ADMINISTRATIVE ACTIVITIES			
1	Receiving UCs & SOEs from RIs for HSS 2007	8th Sept 2008	NACO
2	Receiving Action Plans from RIs for HSS 2008	8th Sept 2008	NACO
3	Seeking concurrence from 2 new RIs for HSS 2008	8th Sept 2008	NACO
4	Finalisation of Action Plan for HSS 2008	22nd Sept 2008	NACO
5	Processing Action Plans from RIs and Release of Grant to RIs	31st Oct 2008	NACO
6	Constitution of State Surveillance Teams	15th Oct 2008	RIs
7	Recruitment of Project Coordinators and Research Officers at RIs	15th Oct 2008	RIs

S.No	Activity	Timeline	Responsibility
8	Recruitment of Data Entry Operators at RIs	31st Oct 2008	RIs
9	Identifying Data Entry Operators at SACS for HSS 2008	31st Oct 2008	SACS
10	Receiving the complete details with photographs of the designated lab technicians nominated by the HRG Sites	7th Nov 2008	SACS
REVIEW OF SURVEILLANCE NETWORK			
1	Coordination Meeting with TI Division, NACO	8th Sept 2008	NACO
2	Orientation to JD (TI)s of all states on HRG Surveillance	8th Sept 2008	NACO
3	Proposals for new HRG Sites/ Testing labs and Deletion of Poorly Performing Sites/ Testing labs for HSS 2008	30th Sept 2008	SACS
4	Validation of proposals for changes in sentinel sites and testing labs	15th Oct 2008	RIs
PROCUREMENT & SUPPLIES			
1	Assessment of Requirement of Kits for HSS 2008	8th Sept 2008	NACO
2	Initiating Procurement of Testing Kits for HSS 2008	15th Sept 2008	NACO
3	Supply of Testing Kits to Testing Labs by SACS	15th Oct 2008	SACS
4	Supply of Consumables to ANC and STD Sites and testing labs by SACS	15th OCt 2008	SACS
5	Disbursement of funds (POL for transportation of samples, TA/DA, contingency) to Sentinel Sites by SACS	15th Oct 2008	SACS
6	Supply of Operational Guidelines and Flow Charts to SACS and RIs	15th Oct 2008	WHO
7	Supply of Operational Guidelines and Flow Charts to ANC & STD Sentinel Sites and Testing Labs	31st Oct 2008	SACS
8	Supply of Operational Guidelines and Flow Charts to HRG Sentinel Sites	31st Nov 2008	SACS
9	Supply of Data Forms to ANC & STD Sites	31st Oct 2008	NIHFW/ SACS
10	Procurement and supply of Consumables for DBS collection at HRG Sites and DBS Testing at designated laboratories	30th Nov 2008	NACO
11	Supply of Data Forms for HRG sites, Consent Forms & ICTC Vouchers to RIs/ SACS	15th Nov 2008	NIHFW
12	Supply of Data Forms, Consent Forms & ICTC vouchers to HRG Sites	30th Nov 2008	SACS
TRAINING			
1	Pre-surveillance Orientation Meeting of RIs and SACS	22nd Sept 2008	NIHFW
2	Pre-surveillance Planning Meeting of SACS Focal Persons & SSTs including orientation to the new training modules by WHO/ NACO (To be conducted at Regional Institutes)	10th to 31st Oct 2008 (Before Training of site personnel)	RIs, WHO, NACO
3	Training of Site In-charges & LTs (ANC & STD sites)	15th Oct to 31st Oct 2008	SACS

S.No	Activity	Timeline	Responsibility
4	Training of Lab In-charges & LTs (Testing Labs)	15th Oct to 31st Oct 2008	SACS
5	Training of RI teams, SSTs and SACS focal persons in the use of DBS Method (TOT to be conducted at RIs)	1st Nov 08 to 30th Nov 08	WHO, NACO and RIs
6	Training of Site In-charges & LTs of HRG Sites in use of DBS Method (To be conducted at RIs, Training imparted by RI teams, SSTs and SACS focal persons)	15th Nov to 30th Nov 2008	RIs and SACS
Note: Trainings mentioned at Nos. 5 & 6 above can be organized on continuous dates as well if calling the SST members twice to RI is difficult.			
7	Training of Lab In-charges & LTs at designated labs for testing on DBS Samples	15th Nov to 30th Nov 2008	NARI, Pune
8	Orientation for Focal Persons at NRLs participating in EQAS	15th Oct to 31st Oct 2008	NIHFW
9	Training of Data Entry Operators from SACS and RIs in the data entry software	15th Nov to 22nd Nov 2008	NIHFW
MONITORING AND SUPERVISION			
1	Collection of Contact Information of Focal Persons for HSS 2008 at SACS	15th Sept 2008	NACO
2	Collection of Contact Information of Testing Centres	15th Sept 2008	NACO
3	Sentinel Site Evaluation and Profiling (Part I)	15th Oct 2008	NACO, SACS
4	Development of Guidelines, Indicators, and Reporting Formats for Monitoring of HSS Activities	30th Sept 2008	NACO
5	Development of Integrated Plan for Supervisory Visits to ANC & STD sites during HSS 2008	31st Oct 2008	NACO, NIHFW, RIs
6	Development of Integrated Plan for Supervisory Visits to HRG sites during HSS 2008	31st Nov 2008	NACO, NIHFW, RIs

SURVEILLANCE AND POST-SURVEILLANCE ACTIVITIES

S.No	Activity	Timeline	Responsibility
1	Surveillance Round at ANC and STD sites	1st November 2008 to 31st January 2009	NACO, NIHFW, RIs and SACS
	Surveillance Round at HRG sites	1st December 2008 to 28th February 2009	NACO, NIHFW, RIs and SACS
2	Completion of data entry and cross-matching	By 31st March 2009	RIs & SACS
3	Investigation into unusual findings of HSS 2008	By 30th April 2009	RIs
4	Freezing of HSS 2008 Data	By 15th May 2009	NIHFW, New Delhi
5	Preparation of Summary Report on HIV Epidemic	By 15th May 2009	NACO
6	Preparation of Activity Report of HSS 2008 including Site Performance Report and Process Documentation Report of DBS Method at HRG Sites	By 31st May 2009	RIs, NACO, WHO
7	Post-surveillance Review Meeting of Focal Persons at SACS	1st May 2009 to 31st May 2009	RIs
8	National Post-Surveillance Review Meeting of RIs and Central Team Members	By 31st May 2009	NIHFW, New Delhi
9	Provision of Honorarium to Sentinel Site and Testing Lab Staff	By 31st March 2009	SACS
10	Sending Participation Certificates to staff involved in surveillance	By 31st March 2009	NACO, NIHFW, SACS
11	Preparation of Activity Report and Summary of findings in the allocated states	BY 30th June 2009	RIs
12	Preparation of Surveillance Country Report 2008	By 30th June 2009	NIHFW, New Delhi
13	Submission of SOEs and UCs by RIs and NIHFW, New Delhi	By 30th June 2009	NIHFW, New Delhi and RIs

Expansion of Sentinel Sites

Norms for expansion of sites

1. Preference for MSM, IDU and Migrant Sites
2. Preference for FSW Sites in North East
3. Involvement of focal person for Targeted Interventions at SACS
4. Willingness for continuous participation every year is important.
5. TI Site in-charge should take training every year.
6. TI should give commitment that the lab technician for surveillance activities will be selected/ recruited two months prior to the round, notified to the SACS and RIs along with his/ her complete details including three photographs. It should be ensured that the same person will be sent for training and will take part in surveillance activities.
7. Any proposal for expansion of sentinel sites should be intimated to the concerned Regional Institute and following discussions and validation by visits by RI's teams, they can be approved by NACO.
8. Proposed number of sites be intimated to NACO by 30th September 2008. Validation and Finalisation of sites be completed by 15th October 2008.

Based on the current distribution of sentinel sites, states are identified where there is need for establishing specific type of sentinel sites. The summary is given in the table below. Similarly, 270 districts are identified with only ANC site but no HRG site. Out of these, 125 districts have shown greater than or equal to 0.5% HIV positivity among ANC Clinic Attendees in HSS 2007 or HSS 2006. These districits are to be given priority in establishing HRG sites.

State-wise Distribution of HRG sites, Preference for new HRG sites and Number of Districts with HRG sites

		Distribution of HRG Sentinel Sites during HSS 2007									
S.No	State	Total No. of Dts.	No. of Dts with HRG sites	FSW	IDU	MSM	TRK	MRG	EUN	Total	Suggested Preference for new HRG Sites during HSS 2008
1	**A & N Islands**	3	0	0	0	0	0	0	0	0	
2	**Andhra Pradesh**	23	16	12	2	6	0	0	0	20	IDU, Migrants
3	**Arunachal Pradesh**	16	1	0	1	0	0	0	0	1	FSW, IDU, MSM
4	**Assam**	27	11	10	2	1	0	0	0	13	IDU, MSM
5	**Bihar**	38	14	11	2	2	0	0	0	15	IDU, MSM, Migrants
6	**Chandigarh**	1	1	3	1	1	0	0	0	5	IDU, MSM
7	**Chhattisgarh**	16	1	2	0	0	0	0	0	2	FSW, Migrants
8	**D & N Haveli**	1	0	0	0	0	0	0	0	0	Migrant
9	**Daman & Diu**	2	0	0	0	0	0	0	0	0	Migrant
10	**Delhi**	9	5	5	2	3	0	0	0	10	IDU, Eunuchs
11	**Goa**	2	1	0	0	1	0	0	0	1	FSW, IDU, MSM
12	**Gujarat**	25	3	3	0	3	0	0	0	6	MSM, IDU, Migrants
13	**Haryana**	20	9	7	1	1	0	0	0	9	IDU, MSM
14	**Himachal Pradesh**	12	5	3	0	1	1	1	0	6	MSM, Migrants
15	**Jammu & Kashmir**	14	0	0	0	0	0	0	0	0	FSW, MSM, IDU
16	**Jharkhand**	24	5	6	0	0	0	0	0	6	MSM, IDU
17	**Karnataka**	27	2	4	1	1	0	0	0	6	FSW, MSM, IDU, Migrants
18	**Kerala**	14	13	6	3	5	1	0	0	15	No Requirement
19	**Lakshadweep**	1	0	0	0	0	0	0	0	0	Migrants
20	**Madhya Pradesh**	50	3	3	0	0	0	0	0	3	FSW, MSM, Migrants
21	**Maharashtra**	35	12	13	1	2	0	1	1	18	IDU, MSM, Migrants, Eunuchs
22	**Manipur**	9	4	3	4	1	0	0	0	8	FSW, MSM
23	**Meghalaya**	7	1	0	1	0	0	0	0	1	FSW, IDU, MSM
24	**Mizoram**	8	5	1	5	0	0	0	0	6	FSW, MSM
25	**Nagaland**	11	8	1	8	0	0	0	0	9	FSW, MSM
26	**Orissa**	30	9	5	3	2	0	0	0	10	MSM, Migrants
27	**Pondicherry**	4	2	3	0	2	0	0	0	5	IDU
28	**Punjab**	20	6	5	3	2	0	0	0	10	IDU, MSM
29	**Rajasthan**	33	5	5	0	0	0	0	0	5	IDU, MSM
30	**Sikkim**	4	2	1	2	0	0	0	0	3	FSW, MSM
31	**Tamil Nadu**	30	11	10	2	2	0	0	0	14	IDU, MSM, Migrants, Eunuchs
32	**Tripura**	4	1	0	1	0	0	0	0	1	FSW, IDU, MSM
33	**Uttar Pradesh**	70	8	6	2	1	0	0	0	9	FSW, IDU, MSM, Migrants
34	**Uttaranchal**	13	0	0	0	0	0	0	0	0	FSW, IDU, MSM
35	**West Bengal**	19	12	9	5	3	5	1	0	23	Migrants, Eunuchs
	All India	**622**	**176**	**137**	**52**	**40**	**7**	**3**	**1**	**240**	

Procurement Plan

1. **Central Procurement of Testing Kits for testing IV Samples**: To overcome the problem of delayed supply of kits and consumables to sentinel sites and testing labs and hence delayed start of surveillance round in some states, this year first test kits (ELISA) will be procured centrally from NACO. **The second test kits (ELISA or RAPID) and VDRL kits should be procured and supplied by SACS.** Before the start of surveillance round, SACS are supposed to supply the first and second testing kits to all the testing labs in their state from the available resource. NACO shall initiate the procurement process by mid-September 2008 and in due course, the quantity of kits used for surveillance purpose will be supplied to SACS. While supplying the kits to the testing labs for surveillance purpose, SACS should note the change in kit requirement this year due to introduction of DBS Method at HRG Sites. The testing of all the DBS samples will be done at designated laboratories in the country which will be specially trained in the method. The testing labs in the states will not test the samples from HRG Sites. They will only test the samples from ANC, ANC(R) and STD sites.
2. **Central Procurement of Testing Kits for testing DBS Samples:** There are no RAPID test kits for testing DBS Samples. Both first and second test on DBS samples should be ELISA. The kits for these laboratories will be centrally procured. For the designated laboratories for the testing of DBS samples, kits will be directly supplied by NACO.
3. **Central Procurement of Consumables for use of DBS Mehtod at HRG Sites:** Since the use of DBS Method requires specific set of consumables such as Filter Papers, Disposable Lancets, drying racks, zip lock bags etc., they are also centrally procured by NACO. The technical specifications are worked out and they are procured through Single Source Purchase. The consumables for use of DBS Method at HRG Sites will be supplied to SACS by 15th November 2008. SACS have to ensure supply to HRG Sites by 30th November 2008.
4. **Procurement of Consumables for use at ANC and STD Sites by SACS:** The consumables required at ANC and STD sites have to be procured by SACS from the budget under surveillance head in the approved annual action plan for the year 2008-09. SACS have to ensure **ADEQUATE** supply of consumables and a copy of Operational Guidelines and Flow Charts to all ANC and STD sites by 15th OCTOBER 2008, so that surveillance round starts from 1st November 2008 at all sites without fail. Suggested list of consumables to be procured by SACS is given below.

Suggested List of Items/ Consumables for ANC and STD Sentinel Sites (Blood Collection Sites)

1. Sterile Disposable Surgical Rubber Gloves
2. Sterile Disposable Syringes 10ml with 21G gauge needle
3. Spirit (450 ml) & Cotton Roll / Alcohol Swabs (Preps)
4. Vein Occluders
5. Sterile Plastic Disposable blood collection vials with Screw caps 10ml
6. Sterile Serum vials with rubber washer and lid 2-3ml
7. Sterile Plastic Disposable Pipettes
8. Racks for storage of vials/ Boxes for storage of filter paper cards
9. Sera Transportation Boxes with lid cover for transport of vials
10. Sodium Hypochlorite Solution 5 litres jar
11. Labels for tubes and vials
12. Plastic Aprons
13. Tissue Paper
14. Stationery
15. Electric Needle Cutter/ Manually-operated Hub Cutter
16. Colour-coded Waste Disposal Bags
17. Any other specific requirement

Equipment for New Sentinel Sites

1. Centrifuge Machine	2. Domestic Refrigerator
3. Hot Air Owen	4. Needle Destroyer
5. Any other specific requirement	

Suggested List of Items/ Consumables for Testing Labs

1. Sterile Disposable Surgical Rubber Gloves
2. Spirit (450 ml) & Cotton Roll / Alcohol Swabs (Preps)
3. Sodium Hypochlorite Solution 5 litres jar
4. Labels for tubes and vials
5. Test Tubes
6. Micro-pipette
7. Sterile Disposable Micro-pipette tips
8. Dispensing bottles
9. Racks for storage of vials
10. Plastic Aprons
11. Tissue Paper
12. Stationery
13. Electric Needle Cutter/ Manually-operated Hub Cutter
14. Colour-coded Waste Disposal Bags
15. Any other specific requirement

Guidelines for Material Management at Sentinel Sites and Testing Labs
ANC and STD Sentinel Sites

S.No	Material	Supply	Guidelines for Management
1	Operational Guidelines	NACO/ SACS during Training or direct supply	Should be available at Sentinel Site during the surveillance round
2	Flow Chart	NACO/ SACS during Training or direct supply	Should be available at Sentinel Site during the surveillance round
3	Consumables	SACS during Training or direct supply	To be used during surveillance round
4	Blood Samples	-	To be sent to Testing Labs every week in transportation boxes.
5	Sample Transportation Boxes	SACS during Training or direct supply	Transportation boxes to be returned by Testing Lab along with stamped Sample Transportation Format endorsing the receipt of samples
6	Sample Transportation Format	SACS during Training	To be sent along with the samples to testing labs. Stamped format to be received back from testing labs.
7	Data Forms	SACS during Training/ Direct Supply	To be sent along with the samples to Testing Lab. Refer to the figure at the end of this section for movement of data forms.

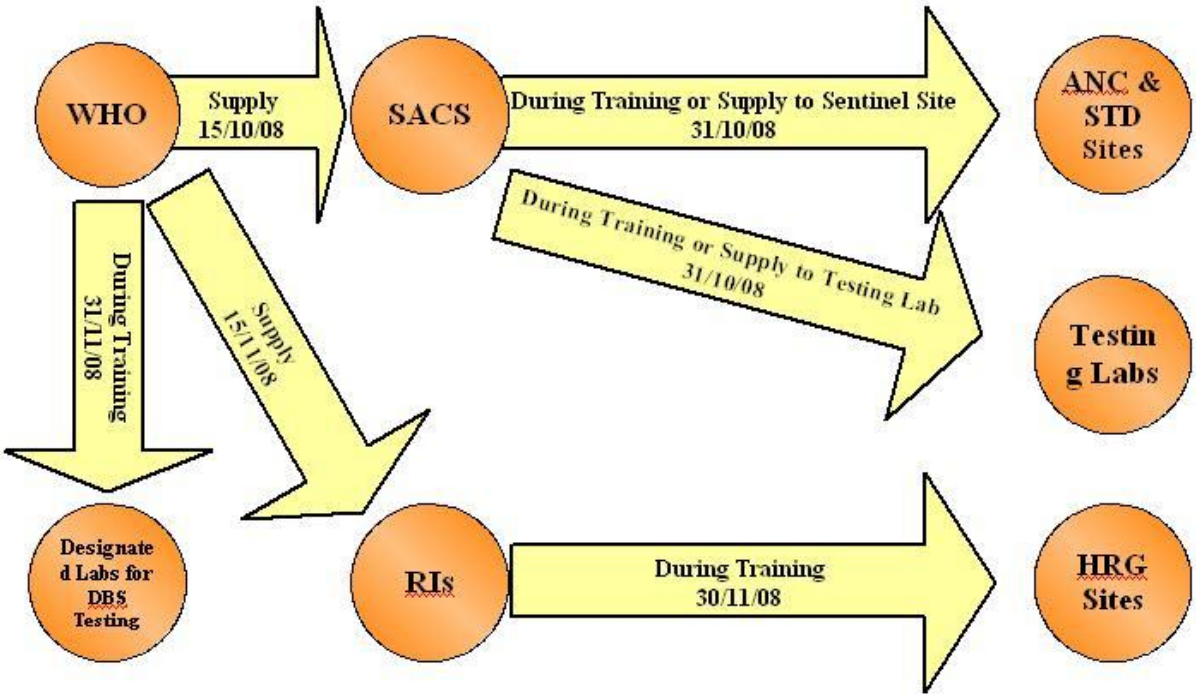
Testing Labs

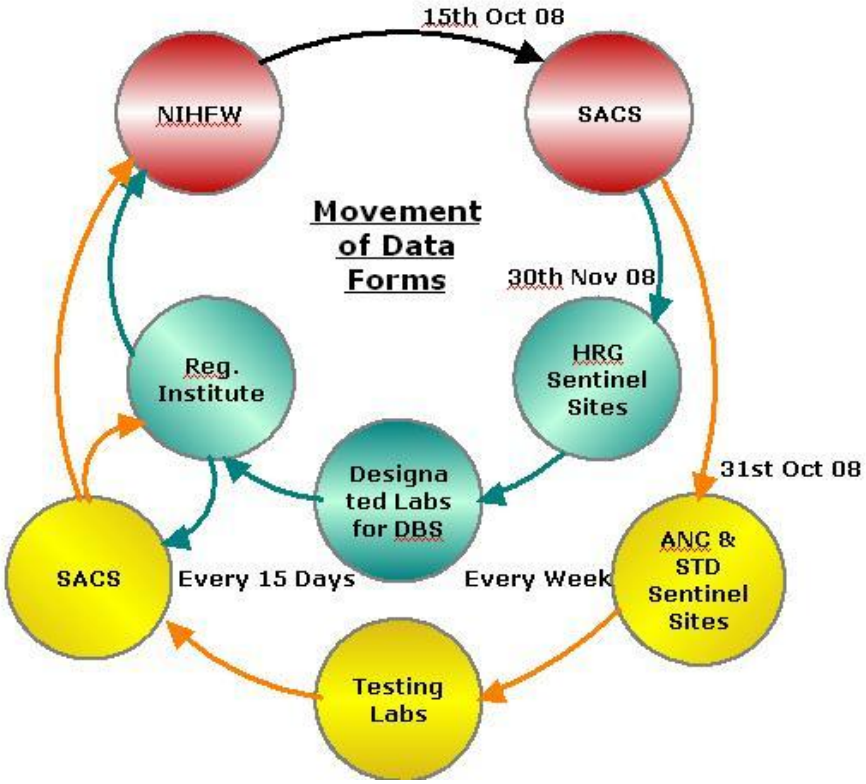
S.No	Material	Supply	Guidelines for Management
1	Operational Guidelines	NACO/ SACS during Training or direct supply	Should be available at Sentinel Site during the surveillance round
2	Flow Chart	NACO/ SACS during Training or direct supply	Should be available at Sentinel Site during the surveillance round
3	Consumables	SACS during Training or direct supply	To be used during surveillance round
4	Data Forms	Sentinel Sites	To be sent to SACS after entering the test results. Refer to the figure at the end of this section for movement of data forms.
5	Blood Samples	Sentinel Sites	All Positive samples and 5% Negative samples to be sent to specified NRL for EQAS. **Rest of the samples to be stored till further orders.**
6	Format for Reporting the status of samples on receipt to sentinel sites	SACS during Training	To be sent to sentinel sites along with the transportation boxes and sample transportation format received from sentinel sites after duly signing and stamping
7	Sample Transportation Format for EQAS	SACS during Training	To be sent along with the samples to NRLs. Stamped format to be received back from NRLs.

Guidelines for material management at HRG sites will be provided separately.

Supply Chain and Timeline for Supply of Material for HSS 2008

Distribution of Operational Guidelines & Flow Charts





Guidelines for Training in HIV Sentinel Surveillance Round 2008

A. Trainees, Trainers and Suggested Duration of Training

S.No	Personnel to be Trained	Responsibility of organizing the training	Trainers	Duration of Training
1	Site in-charges and lab technicians at ANC and STD sites	SACS, with support from RIs & SSTs	SSTs, SACS focal person	Two Days
2	Lab in-charges and lab technicians at Testing Labs	SACS, with support from RIs & SSTs	SSTs, SACS focal person	One Day
3	RI teams, State Surveillance Teams (SST) and SACS focal persons in DBS Method (TOT)	RIs	Selected Trainers for DBS method	One Day
4	Site in-charges, lab technicians and counselor/ NGO Staff member at HRG sites in use of DBS method	RIs	RI team, SSTs, SACS focal person	Three Days
5	Lab in-charges and lab technicians at Testing Labs for DBS samples	NARI, Pune	NARI, Pune	One Day

B. Development of Training Schedules, Curriculum and Modules: To improve the effectiveness of training in Surveillance activities and to ensure uniformity and quality of training programmes across the country, separate Training Curriculum and Training Modules are being developed for the first time. Separate Trainer's Manuals are also being developed. Surveillance Team at RIs, SSTs, SACS focal persons will be thoroughly trained in technical as well as operational issues so that they can provide on-site support and guidance to the field staff during their supervisory visits. Personnel at sentinel sites and testing labs will be trained through structured and well-monitored programmes.

C. Training for Surveillance at HRG sites

1. **Training of Trainers (TOT):** Due to new strategy at HRG sites in HSS 2008, SSTs have to be trained and oriented in DBS Method as well as the specific issues to be addressed during training and supervisory visits. SSTs should be well trained in DBS method so that they can provide on-site training during the supervisory visits. A set of master trainers, who have prior experience in the management of DBS method is being identified by NACO/ WHO who will conduct the TOT for RI teams, SSTs and SACS focal persons in the use of DBS method. RI teams, SSTs and SACS focal persons shall train the HRG site personnel.
2. **Separate Rigorous Training for HRG Site Personnel:** Training will be provided separately for the personnel involved at High Risk Group sites. To have uniform standard of training and since DBS Method is introduced for the first time, training for site in-charges and lab technicians at HRG sites in the use of DBS Method will be conducted by RIs and budgetary support on per-participant basis

and TA/DA for the participants be provided by SACS from their surveillance head in the approved Annual Action Plan.

3. **Strict monitoring of lab technicians from HRG Sites:** SACS shall issue a circular to all the HRG Sites in their respective states asking them to identify a lab technician whom they can employ for the three month period of surveillance and intimate the complete details of the lab technician along with three recent photographs to SACS **by 7th November 2008**. The same person will be trained in the DBS Method of sample collection during November 2008 at the RIs. And it is to be verified during the supervisory visits that the same lab technician is being employed for the purpose of sample collection. Photographs will be useful for identification during training as well as supervisory visits.
4. **Compulsory Training for LTs from HRG sites:** If lab technicians from one or two HRG sites fail to participate in the training provided by the concerned Regional Institute due to some genuine reason, they can be sent for training at any other Regional Institute that happen subsequently. PARTICIPATION OF LAB TECHNICIAN FROM HRG SITE IN THE TRAINING IN USE OF DBS METHOD IS MANDATORY. IF LAB TECHNICIAN FROM ANY HRG SITE FAILS TO PARTICIPATE IN THE TRAINING PROGRAMME OR IF THE TRAINED LAB TECHNICIAN IS FOUND TO BE NOT PARTICIPATING IN THE SURVEILLANCE ACTIVITY, THAT HRG SITE WILL NOT BE INCLUDED IN THE SURVEILLANCE ROUND.
5. **Training for designated labs in testing DBS Samples:** Training of lab in-charges and lab technicians at the designated laboratories will be undertaken separately by NARI, Pune, which will act as the Reference Laboratory for EQAS in testing of DBS Samples.
6. **Structured Training Protocol:** The training of HRG site personnel shall include both theoretical and field training. Field training is more important as all the field staff should be confident in the collection of DBS samples. A structured training protocol is being developed for the same. **Separate instructions will be given for organizing training for HRG surveillance.**

D. Training for Surveillance at ANC and STD sites

7. **Training for personnel from ANC and STD sites and testing labs:** SACS have to organize **TWO DAY** training for ANC and STD site in-charges and lab technicians and **ONE DAY** training for testing lab in-charges and lab technicians in their states with due intimation of the schedule to Regional Institutes, NIHFW, New Delhi and NACO. It is to be ensured that a team member from Regional Institute and members of SSTs participate in the training programmes at SACS.
8. **Regional Trainings in States to ensure greater participation:** It has to be ensured that personnel from all the sentinel sites and testing labs participate in the trainings. Regional trainings within the state may be organized with the support of RI teams and SSTs to ensure greater participation from sentinel sites. The sentinel sites whose personnel do not participate in training programmes have to be tracked and special efforts have to be made to cover such sites during supervisory visits.
9. **Structured Training Protocol:** A structured training protocol is developed for training of ANC and STD site personnel. All SACS are suggested to follow the same to ensure uniformity and quality of training across the country.

E. Other General Guidelines for Training

10. Dates for training programme to be determined by SACS in consultation with RIs. Suggested Time line for training activities is given below. All the sentinel sites should be properly intimated to send

only the medical officer and lab technician who will take responsibility during the round and not to send someone for the sake of representation. If lab technician is not in place, any other staff/ nurse who handle sample collection should be sent to the training.

11. **Plan additional time for distribution of material and funds:** Trainings can be used as a convenient opportunity for distribution of Operational Guidelines, Flow Charts and Data Forms, Informed Consent Forms and ICTC Vouchers in case of HRG Sites Personnel Training. This ensures that the required material reach the sentinel sites and testing labs before the start of round. Trainings can also be used to disburse the funds to sentinel sites. (Rs. 10,000/- approved per site for expenditure on POL for transportation of blood samples, TA/DA for the personnel transporting the samples and contingency expenditures at sentinel sites.) BUT THESE ACTIVITIES SHOULD NOT DISTURB THE PRESCRIBED TRAINING PROTOCOL. ADDITIONAL TIME CAN BE PLANNED FOR THESE WORKS.
12. **Certificates of Training and Participation** in Surveillance activities will be provided to the personnel at sentinel site and testing labs as well as to the SST members. Especially, the certificate of training in DBS Method will be useful for the lab technicians and may enhance their commitment to the programme. These certificates will be provided after the round of surveillance only if the person who got trained participates in the surveillance activities till the end of the round.
13. **Involvement of focal persons from SACS:** Focal person for surveillance at SACS have to participate in all the trainings conducted by the concerned Regional Institute and support the Regional Institute in organizing the programmes. Focal person for TI Programme to be involved in the training for site in-charges and lab technicians at HRG sites in the use of DBS Method.
14. **All the trainees have to be provided with per-diem and Travel Allowance as per the guidelines.**

F. Documenting and reporting on Training Programmes

15. All SACS shall intimate concerned RIs and NACO on the dates of the training programmes by 15th October 2008.
16. Standard formats to document and report the proceedings of the training programmes are developed. After the training programmes are conducted, SACS shall report to RIs and NACO on the details of the training programme in the prescribed format by email. (Soft copy of the format will be sent to the SACS)
17. Pre-training assessment schedule and Post-training assessment and feedback schedules for all training programmes will be sent to SACS along with training manuals.
18. The format mentioned above will have provision to report the summary of pre-training and post-training assessment.

Training Plan and Timeline of Training Activities

S.No	Activity	Responsibility	Timeline	Source of Budget
1	Pre-surveillance Orientation Meeting of RIs and SACS	NIHFW, New Delhi	22nd Sep 2008	NIHFW, New Delhi
2	Finalisation of Curriculum and Modules and Trainer's Manual for Training of ANC & STD Site Personnel	WHO and NARI, Pune	30th Sept 2008	WHO
3	Printing of Training Material for HSS 2008 for ANC & STD Site Personnel and supply to SACS	WHO and NARI, Pune	15th Oct 2008	WHO
4	Constitution of State Surveillance Teams	RIs	15th Oct 2008	
5	Pre-surveillance Planning Meeting of SACS Focal Persons & SSTs including orientation to the new training modules by WHO/ NACO (To be conducted at Regional Institutes)	Regional Institutes, NIHFW and NACO	10th to 31st Oct 2008 (Before Training of site personnel)	Regional Institutes
6	Training of Site In-charges & LTs (ANC and STD sites)	SACS/ SSTs under supervision of RIs	15th Oct 2008 to 31st Oct 2008	SACS
7	Training of Lab In-charges & LTs (Testing Labs)	SACS/ SSTs under supervision of RIs	15th Oct 2008 to 31st Oct 2008	SACS
8	Finalisation of Curriculum and Modules and Trainer's Manual for Training of HRG Site Personnel	WHO and NARI, Pune	15th Oct 2008	WHO
9	Printing of Training Material for HSS 2008 for HRG Site Personnel and supply to RIs/ SACS	WHO and NARI, Pune	31st Oct 2008	WHO
10	Identification of Trainers for TOT in use of DBS Method	NACO and WHO	15th Oct 2008	
11	Selection and Nomination of Lab Technicians by HRG Sites and obtaining complete contact details of the LTs	SACS	7th Nov 2008	
12	Training of Trainers in DBS method	RIs/ NACO/ WHO	1st to 30th Nov 2008	RIs
13	Training of Site In-charges & LTs (HRG Sites)	Regional Institutes	15th Nov 2008 to 30th Nov 2008	SACS
14	Training of Lab In-charges & LTs (Designated Labs at for testing DBS samples)	NARI, Pune	15th Nov 2008 to 30th Nov 2008	NARI, Pune
15	Orientation for Focal Persons at NRLs participating in EQAS	NIHFW, New Delhi	15th Oct 2008 to 31st Oct 2008	NIHFW, New Delhi
16	Training of Data Entry Operators from SACS and RIs	NIHFW, New Delhi	15th Oct 2008 to 31st Oct 2008	NIHFW, New Delhi

Monitoring, Supervision and Documentation

1. **Process Monitoring and Outcome Monitoring:** As mentioned earlier, monitoring and supervision will be given highest priority during HIV Sentinel Surveillance Round 2008. Processes as well as outcomes will be monitored and feedback will be provided to the concerned personnel. Activities at all levels of Surveillance System will be monitored so as to initiate corrective measures immediately.
2. **Approach:** The approach will be of 'SUPPORTIVE SUPERVISION' and 'ACTION-ORIENTED MONITORING' where technical and operational support will be provided and investigation and corrective measures will be initiated **when the process of surveillance is still on**. This helps in quickly identifying the problem areas and addressing them so that quality issues are addressed immediately. This also reduces the time lag after the round in investigating the causes for unusual outcomes when no corrections can be made. So, the objective is to put in place a dynamic process monitoring system that will enhance the effectiveness of processes and quality and reliability of outcomes.
3. **Evaluation and Profiling of sentinel sites and testing labs:** Several infrastructure and man-power related problems are identified during the supervisory visits as major causes for poor performance of some sentinel sites and testing labs, thereby questioning the validity of the data emerging from there. Since these problems are identified only during the surveillance round, there is hardly any time to initiate corrective measures. To handle these perennial problems, this year, a pre-surveillance evaluation and profiling of sentinel sites and testing labs is proposed that helps in understanding the ground situation at the sites where surveillance is going to be held. It also collects brief information on the utilization rates, client profile and catchment area of the sentinel site so that it helps in understanding the epidemic better. Simple, short and easy-to-administer formats are being developed for the purpose. The details of this exercise are provided at the end of this section.
4. **Site Performance Reports:** After the surveillance round, when the data is analysed, it is necessary to ensure that the findings at a specific site are truly reflective of the ground scenario and not due to any operational issues such as improper recruitment of sample or testing methods. This is especially important at sites where the new findings do not fall in consonance with earlier findings and also at sites with zero prevalence. In order to enhance the credibility of the findings at specific sites, site performance reports will be developed based on the information from sentinel site evaluation, action taken reports at specific sites and supervisory reports. A grading scale is being developed taking into account all these information about a site to understand its performance levels. Though supervisory reports will not be available for all sites, sites where problems are identified in this round can be prioritised for supervision during the subsequent rounds.
5. **Integrated Supervisory Plan:** Planning of supervisory visits will be an integrated exercise to avoid repetition as well as to expand the spread of supervision. Proposed plan for supervisory visits by SACS, SSTs, RIs and central team members will be integrated before start of the round. Sentinel sites and testing labs will be prioritised for supervision based on the information from sentinel site evaluation as well as experiences of RIs and SACS during the previous rounds.
6. **Levels of supervision** are as follows:
    a. NACO, NIHFW and Central Team Members

   b. Members from Regional Institutes
   c. State Surveillance Teams
   d. Focal Persons at SACS for surveillance and Targeted Interventions
   e. Supervisory teams constituted by SACS
7. **Rigorous Supervision of HRG Sites:** Since there are many changes in the strategy and methods at HRG sites, ALL HIGH RISK GROUP SITES WILL BE MANDATORILY VISITED BY A SUPERVISOR AT LEAST ONCE DURING THE ROUND OF SURVEILLANCE. WHERE THERE IS POSSIBILITY, MORE THAN ONE SUPERVISORY VISIT BY MEMBERS FROM DIFFERENT LEVELS IS ENCOURAGED.
8. **Strengthening State Surveillance Teams:** SSTs will be strengthened with three to eight members in every state. They work under the guidance of RIs and support RIs in fulfilling their responsibilities. All the districts in the state will be distributed among SST members who will help in monitoring the activities in their concerned districts and to initiate corrective measures whenever required. For this purpose, it is encouraged to take members for SST from different medical colleges located in different places in the state.
9. **Testing labs as focal points for monitoring:** Testing labs will be the focal point for monitoring surveillance activities, both at labs and sentinel sites. Sentinel sites are more than thousand in number and are vastly spread. But the number of testing labs participating in surveillance is around 200 and hence relatively easy to contact and monitor. Information from testing labs such as method adopted for sending samples by a sentinel site, periodicity of receiving samples from a sentinel site, condition in which samples are received, consecutive positive samples in a group of samples from a site and nature of filling of Data forms provide rich information about the functioning and performance of a sentinel site. Since each testing lab is linked to five to eight sentinel sites on an average, it will be easy for the labs to report information site-wise. For this purpose, the contact details of testing lab in-charges are collected at NACO and will be shared with all. Most of the testing lab in-charges access Internet and do have email ids. Hence, this mode of communication will be used for reporting by Testing Labs every 15 days. Formats for this purpose are being developed. In a few cases where there is no Internet access for the testing lab in-charge, the information has to be collected telephonically by the concerned SST or Regional Institute and then upload it on the internet.
10. **Action Taken Reports** in specified formats have to submitted by SACS/ SST/ RIs/ NACO after taking corrective measures for any identified problem.
11. **Fortnightly Programme Updates** will be prepared at NACO and shared with all.
12. **Process Documentation of Implementation of DBS Method at HRG Sites and Testing Labs:** Besides process monitoring reports, process documentation of sample collection, drying, storage, transport and testing of DBS samples at HRG sites and designated labs is proposed during HSS 2008. Since this is the first time that DBS is being implemented in HSS, documenting the processes in terms of practices adopted and problems faced will provide a strong basis for planning for the coming rounds. More importantly, documentation of time processes may help in developing Indian Standards for use of DBS method.
13. **Reporting Formats:** Simple, Easy-to-use, Customised Adobe/Excel-based formats for monitoring Process Indicators as well as Outcome Indicators are being developed. List of reporting formats to

be used in HSS 2008 is given below. Complete details of the formats, instructions for using the formats and mechanisms of reporting will be provided separately.

List of Reporting Formats to be used in HSS 2008

1. Format for Sentinel Site Evaluation and Profiling
2. Format for Documenting and Reporting on Training Programmes by SACS
3. Sample Transportation Format for Sentinel Sites
4. Process Documentation Format for HRG sites
5. Format for Reporting the status of samples on receipt at Testing Labs
6. Fortnight Reporting Format for Testing Labs
7. Sample Transportation Format for Testing Labs (for EQAS)
8. Format for Reporting EQAS results by NRLs
9. Format for Report of supervisory visit to sentinel site
10. Format for Report of supervisory visit to testing lab
11. Format for Activity/ Action Taken Report of SST members
12. Formats for reporting progress of surveillance activities by SACS and RIs

Timeline of Activities related to Monitoring, Supervision and Documentation

S.No	Activity	Responsibility	Timeline
1	Collection of Contact Information of surveillance focal persons at SACS	NACO	08th September 2008
2	Collection of Contact Details of Testing Labs	NACO	08th September 2008
3	Constitution of State Surveillance Teams	Regional Institutes	15th October 2008
4	Developing Guidelines, Indicators, and Reporting Formats	NACO	30th September 2008
5	Sentinel Site Evaluation and Profiling (Part I)	NACO and SACS	15th October 2008
6	Development of Integrated Plan for supervisory visits during the round	NIHFW, New Delhi & NACO	31st October 2008
7	Supervisory Visits during the round	NACO, NIHFW, Central Team Members, RIs, SSTs	1st November 2008 to 28th February 2009
8	Preparation of Fortnightly Updates on HSS 2008	NACO	1st November 2008 to 28th February 2009
9	Initiation of Feedback Action on identified process lapses & Submission of Action Taken Reports	NACO, Regional Institutes, SACS	1st November 2008 to 31st January 2009
10	Issue of participation certificates for all sentinel site/ testing lab staff & SSTs involved in HSS	NACO, NIHFW, New Delhi, SACS	By 31st March 2009
11	Preparation of Activity Report of HSS 2008 including Site Performance Report and Process Documentation Report of DBS Method at HRG Sites	Regional Institutes, NACO, WHO	By 31st May 2009

Sentinel Site Evaluation and Profiling

It includes:

1. Evaluation of status of infrastructure and availability & training status of man-power at sentinel sites and testing labs
2. Identification of possible problems or issues at the sentinel sites and testing labs for HSS 2008
3. Profiling of services provided at the sentinel site and utilization rates
4. Profiling of the catchment area of the sentinel site in terms of geographic units and demographic parameters
5. Collection of complete contact information of all the sentinel sites and testing labs

Objectives of Sentinel Site Evaluation and Profiling

1. To identify the problem sites with poor infrastructure/ man-power
2. To facilitate initiation of corrective actions to address the problems of infrastructure and man-power before the start of surveillance round (e.g. Communicating the issues to DMO etc.)
3. To prioritise sites for supervisory visits during the round of surveillance
4. To develop process documentation and site performance reports after the round of surveillance
5. To provide credibility to the findings at different sites after the surveillance round based on the status and performance of different sites
6. To understand the profile of people accessing the services at the sentinel sites

Methodology

1. Data collection formats for the evaluation are developed by NACO. The formats along with the instructions to use the formats will be sent to all SACS by Email.
2. Data collection format has two sections – First on evaluation of infrastructure and HR status of the sites and the second on profiling of the catchment area.
3. Focal person for surveillance at SACS will be responsible for collection of information.
4. The first section is supposed to be completed in the pre-surveillance period. The information in the second section can be collected by the end of surveillance round.
5. Information for the first section is advised to be collected telephonically as far as possible. This has to be submitted to NACO through Email by **15th October 2008** so that there will be time for initiation of corrective action by RIs and SACS at the problem sites, before the start of the round of surveillance.
6. Information for the second section can be collected telephonically, if possible, or by sending the format to the site in-charge and requesting him to bring the information while coming for training, or by the supervisors who visit the sentinel sites during the round of surveillance.
7. Data analysis will be done by NACO and WHO. Immediate feedback on the problem sites will be provided to the concerned RIs and SACS to initiate corrective action.

Administrative Action Points for HIV Sentinel Surveillance Round 2008

NACO

1. Approval of Action Plan and communication of action plan to RIs and SACS **(By 30th Sept 2008)**
2. Initiation of Procurement of Testing Kits and Consumables for DBS Method at HRG sites **(By 22nd Sept 2008)**
3. Providing 'Revised Financial Guidelines' and 'Guidelines for monitoring, supervision and reporting' to Regional Institutes and SACS **(20th Oct 2008)**

Regional Institutes

1. Constitution of State Surveillance Teams, distribution of districts among SST members and intimation to NACO/ NIHFW about the distribution along with complete contact details of SST members **(By 15th Oct 2008)**
2. Recruitment of Supportive Staff **(By 15th Oct 2008)** and Data Entry Operators **(By 31st Oct 2008)** and intimation to NACO/ NIHFW, New Delhi the details of the staff along with contact information.
3. Validation of proposals from SACS for deletion or addition of sentinel sites and testing labs and forwarding the proposals to NACO for approval. **(By 15th Oct 2008)**
4. Preparation of and submission to NACO/ NIHFW, New Delhi, a list of composite sites in the allotted states with details of type of site, number of sub-sites, names of sub-sites and the sample size allotted to each sub-site. **(By 15th Oct 2008)**

State AIDS Control Societies

1. Proposals for addition or deletion of sentinel sites/ testing labs to be put up to RIs for validation and sent to NACO for approval after validation **(By 15th Oct 2008)**
2. Review of Testing Lab Situation in the state with a preference to limit the testing of samples during surveillance to a less number of testing labs equipped with doing ELISA test and submitting the finalized list of testing labs in the states along with the kit requirement (ELISA or Rapid and Quantity in terms of number of tests). **(By 10th Oct 2008)**
3. Sentinel Site Evaluation and Profiling **(Part I to be completed before 15th Oct 2008)**.
4. Procurement and supply of HIV Test kits, VDRL test Kits and Consumables for Testing Labs and ANC & STD sites **(By 15th Oct 2008)**.
5. Initiate planning for training programmes for sentinel site in-charges, lab technicians and nursing staff at ANC and STD sites. Training to be organized between **15th and 31st October 2008 after the pre-surveillance orientation meeting at the concerned RI.**
6. Issuing circular to site in-charges of all HRG sites to identify a lab technician for HSS 2008 and obtaining the complete details (Name, Age, Gender, Address, Mobile No, Email Id, Qualifications and Past experience) of the identified lab technician at each HRG site along with three recent passport photos. **(By 7th Nov 2008)**